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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,174	11/12/1999	IAN M. BENNETT	PHO-99-003	1347

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EXAMINER	
LERNER, MARTIN	

ART UNIT	PAPER NUMBER
2654	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/439,174	BENNETT, IAN M.	
	Examiner	Art Unit	
	Martin Lerner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 to 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 to 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 August 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/19/02 & 9/25/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The substitute specification filed 19 August 2002 has been entered.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

Speech-Enabled Server for Internet Website and Method.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation of "environmental variables experienced by the user" is vague and indefinite. On its face, the term "environmental variables" does not have a well-defined meaning or scope.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 to 11, 13, 14, 16, 18, 20, 25, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by *Halverson et al.*

Regarding independent claims 1, 13, 18, 25, and 26, *Halverson et al.* discloses a system and method for navigating network-based electronic information using spoken input, comprising:

"a receiving routine executed on the server computing system for receiving speech data associated with a user speech-based query, said speech data being characterized by a data content that is substantially inadequate by itself for permitting recognition of words articulated in said speech query" – a user's voice input data is captured by a voice input device 102, such as a microphone; communications box 104 is capable of retransmitting the raw voice data and/or processing the voice data, and then transmitting the voice data, which may be in a compressed form, from client to communications network 106 (column 3, lines 41 to 67: Figure 1a); at remote server 108, the voice data is processed to understand the user's request and construct an

appropriate query or request for navigation (column 4, lines 1 to 6: Figure 1a); design considerations favoring server-side processing and interpretation of spoken input requests include minimizing the need to distribute costly computational hardware and software to all client users (column 5, lines 42 to 46: Figure 1a); thus, the raw voice data and/or processed voice data is "a data content that is substantially inadequate by itself for permitting recognition of words articulated in the speech query" because processing of the spoken input is server-end processing;

"a speech recognition routine executing on the server computing system for completing recognition of said speech query using said speech data and said data content to generate a recognized speech query" – at remote server 108, the voice data is processed by request processing logic 300 in order to understand the user's request and construct an appropriate query or request for navigation of remote data source 110; for purposes of executing this process, request processing logic 300 comprises functional modules including speech recognition engine 310 (column 4, lines 1 to 11: Figures 1a and 3);

"a web page having a list of items, at least some of said list of items being selectable by a user based on said recognized speech query" – data source 110 may comprise Internet/web site(s), or other electronic information repositories, and preferably resides on a central server or servers (column 4, lines 11 to 24: Figure 1a); in the example in which the user of a web surfing application wants to know his or her local weather, and simply asks, "what's the weather?", an online web site providing the current weather information for major cities around the world is selected; query

refinement logic 340 preferably generates output for client display device 112 soliciting necessary supplemental input; a preferred embodiment would display an alphabetical scrollable menu listing other major cities and/or invite the user to speak or select the name of the desired city (column 12, lines 9 to 32: Figure 4).

Regarding claim 2, *Halverson et al.* discloses an example where the user can proceed through a sequence of menus, such as genre, title, actor, and director; in each case, the user would typically scroll and select from fairly long lists in order to enter his or her desired name (column 11, lines 24 to 24 to 36); each menu is "an additional list of one or more items".

Regarding claim 3, *Halverson et al.* discloses navigating network-based electronic information using spoken input to retrieve desired information (Abstract).

Regarding claim 4, *Halverson et al.* discloses exemplary embodiments for applications involving video-on-demand and weather reports (column 11, line 24 to column 12, line 32), which are "services offered by said website".

Regarding claim 5, *Halverson et al.* discloses common web protocols such as HTML and Java (column 9, line 66 to column 10, line 4).

Regarding claim 6, *Halverson et al.* discloses display information transmitted electronically back to the user across network 206 is displayed for the user on the display information appliance 202, and audio information is output through the appliance's speakers (column 6, lines 4 to 9: Figure 2); display is in the forms of menus or lists (column 11, lines 24 to 36; column 12, lines 29 to 32); displayed menus and lists

are in the form of text, and audio information output is in the form of speech by a text to speech agent (Figure 6).

Regarding claim 7, *Halverson et al.* discloses spoken speech queries such as "what's the weather?" (column 12, line 11); speech recognition of "what's the weather?" necessarily involves continuous speech recognition because discrete speech recognition can only recognize isolated words and commands (e.g. "one", "enter", "back"); a high bandwidth communications infrastructure (column 1, line 29) is utilized, which implicitly has the objective of real-time performance.

Regarding claim 8, *Halverson et al.* discloses design considerations favoring server-side processing and interpretation of spoken input requests include minimizing the need to distribute costly computational hardware and software to all client users (column 5, lines 42 to 52: Figure 1a); distributing hardware and software between the client and server so as to favor server-side processing minimizes processing by the client, and thereby reduces latency as compared to the situation where the client performs speech recognition.

Regarding claim 9, *Halverson et al.* discloses a user's voice input data is captured by a voice input device 102, such as a microphone; communications box 104 is capable of retransmitting the raw voice data and/or processing the voice data, and then transmitting the voice data, which may be in a compressed form, from client to communications network 106 (column 3, lines 41 to 67: Figure 1a); at remote server 108, the voice data is processed to understand the user's request and construct and appropriate query or request for navigation (column 4, lines 1 to 6: Figure 1a); thus, the

raw voice data and/or processed voice data is "a minimum amount of information that can be used by said speech recognition engine to complete accurate recognition of words and sentence in said speech query".

Regarding claim 10, *Halverson et al.* discloses design considerations favoring server-side processing and interpretation of spoken input requests include minimizing the need to distribute costly computational hardware and software to all client users; however, design considerations favoring client-side processing include minimizing the quantity of data sent upstream across the network from the client, reducing the upstream bandwidth requirements (column 5, lines 42 to 53: Figures 1a and 1b); thus, *Halverson et al.* discloses "signal processing functions . . . can be allocated between a client platform and the server computing system as needed based on computing resources available to said client and server computing systems respectively."

Regarding claims 11 and 16, *Halverson et al.* discloses open agent architecture provides a client agent (column 13, lines 3 to 60), and, specifically, an animated voice interactive information system (column 13, line 50).

Regarding claim 14, *Halverson et al.* discloses navigational query searching selects an appropriate online data source from a plurality of online data sources, and searching through an online search engine or other online search techniques ("more than one server computing system" and "multiple search engines") (column 8, lines 40 to 51).

Regarding claim 20, *Halverson et al.* discloses natural language processing (column 7, line 54 to column 8, line 31).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 12, 15, 17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Halverson et al.* in view of *Giangarra et al.*

Halverson et al. does not expressly disclose applications to a list of topics associated with an interactive lesson tutorial or to assist a user to diagnose a product or service problem. Generally, such applications of interactive voice response (IVR) systems are well known. Specifically, *Giangarra et al.* teaches a voice command interface to allow a user to speak a name of a link identified by HTML format to receive a desired web page. (Abstract) Figures 4 to 12 disclose applications providing history and background information for the IBM patent server web site and the US Patent and Trademark Office web site, which are "interactive lesson tutorials" on information contained in the sites. Additionally, Figures 6 and 8 show a selection for "Help" or "FAQ", which "assists a user to diagnose a service problem". (Column 6, Line 66 to Column 8, Line 52: Figures 4 to 12) *Giangarra et al.* suggests that allowing the user to speak a name of a link identified by HTML to receive a desired web page has the advantage of providing an intuitive and easily usable interface for accessing information from a network of computers such as the World Wide Web. (Column 2, Lines 6 to 15)

It would have been obvious to one having ordinary skill in the art to provide applications to interactive lesson tutorials and assisting a user to diagnose a service problem as taught by *Giangarra et al.* in the system and method for navigating network-based information of *Halverson et al.* for the purpose of providing an intuitive and easily usable interface for accessing information.

9. Claims 19 and 21 to 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Halverson et al.* in view of *Horiguchi et al.*

Concerning claim 19, *Halverson et al.* does not expressly disclose a technique of recognizing a speech query from a number of predefined sentences to determine a matching recognized sentence. However, a variety of techniques for parsing and recognizing speech are known that include recognizing example sentences. Specifically, *Horiguchi et al.* teaches an analogous art system and method for natural language parsing and translating, where example database 220 includes various linguist constructs such as full sentences ("How do you do?" and "May I help you?") and noun phrases ("strong coffee"). (Column 8, Line 57 to Column 9, Line 11: Figure 3) *Horiguchi et al.* suggests the method and system incorporates the ease and accuracy of the example-based method with the ability to manipulate transfer rules to allow for a variety of attempts at translation. (Column 2, Lines 32 to 36) It would have been obvious to one having ordinary skill in the art to utilize example databases containing complete sentences and noun phrases as taught by *Horiguchi et al.* in the system and method for navigating network-based information of *Halverson et al.* for the purpose of

providing for ease and accuracy to allow for a variety of attempts at natural language processing.

Concerning claim 21, *Horiguchi et al.* teaches example database 220 includes noun phrases ("strong coffee"). (Column 8, Line 57 to Column 9, Line 11: Figure 3)

Concerning claims 22 and 23, *Halverson et al.* discloses a speech recognition engine's vocabulary is adjusted to favor relevant words and phrases, such as a stored list of proper names for popular movie actors and directors, or a stored list of proper names for professional sports teams. (Column 7, Lines 35 to 46) Adjusting the vocabulary according to subjects such as movies and sports is equivalent to "a context dictionary", "an operating environment", and "environmental variables experienced by the user".

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Perrone, Colbath et al., and Ladd et al. ("359) disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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8/4/04

Martin Lerner
Examiner
Group Art Unit 2654